GCA-WR-4659

REVIEW OF WASTE ANALYSIS PLAN FOR THE CHEMICAL PROCESSORS, INC. PIER 91 SITE

LETTER REPORT

(EPA Contract No. 68-01-6769, Work Assignment No. 85-429)

SUMMARY

At the request of EPA Region X, GCA has provided a technical review the waste analysis plan prepared by Chemical Processors, Inc., (Chempro) Pier 91 facility in Seattle, Washington. The specific Chempro document reviewed was entitled "General Waste Analysis".

GCA reviewed the waste analysis plan for technical adequacy and compliance with the requirements stated in 40 CFR Part 265 Subpart B (Ge Facility Standards, General Waste Analysis 265.13), Subpart J (Tanks, Wa Analysis and Trial Tests 265.193), and Subpart Q (Chemical, Physical, an Biological Treatment, Waste Analysis and Trial Tests 265.402).

GCA utilized the expertise of staff regulatory specialists, enginee and scientists to cover all aspects of the technical review. A technica adequacy checklist for the waste analysis plan is presented in Table 1. General deficiencies in the plan are summarized below, and detailed in the following narrative.

General Deficiencies

- The plan does not specify that the results of shipment inspect are compared with the manifest or shipping paper as required u 265.13(a)(4) and 265.13(c).
- The plan does not define specific parameters for which incomin wastes are to be analyzed, as required under 265.13(b)(1).

TABLE 1. COMPLETENESS AND TECHNICAL ADEQUACY CHECKLIST - WASTE ANALYSIS PLAN

40 CFR SUBPARTS B, J, K, L, M, O, P, and Q

Regulation	Technical topic	Is this regulation applicable to the facility?	Was the regulation addressed?	Is the applicant's plan technically adequate?	Comments
Subpart B - General Requirements					
265.13	General Waste Analysis	Yes	Yes	No	See specific part below.
265.13(a)(3)	Frequency of Analysis	Yes	Yes	Yes	
265.13(a)(4)	Inspections of Shipments	Yes	Yes	No	Plan should state that there is a check against manifest.
265.13(b)	Written Waste Analysis Plan	Yes	Yes	N/D	
265.13(b)(1)	Parameters for analysis and rationale for their selection	Yes	Yes	No	Plan lacks specific analytical parameters and supporting data for their selection.
265.13(b)(2)	Test Methods for Analysis	Yes	Yes	No	Should cite specific analytical methods that are used.
265.13(b)(3)	Sampling Methods	Yes	Yes	No	No specific sampling methods.
265.13(b)(4)	Frequency of repetition of initial analysis	Yes	Yes	Yes	
265.13(b)(5)	Waste analysis data supplied by offsite generator	No	N/A	N/A	
265.13(c)(1)	Procedures to determine the identity of each movement of waste	Yes	Yes	No	Plan should state that there is a check against manifest.
Subpart J - Tanks					
265.193	Waste Analysis and Trial Tests	Yes	Yes	Yes	
Subpart K - Surface Impoundments					
265.225	Waste Analysis and Trial Tests	No	-	-	

(continued)

TABLE 1 (continued)

Regulation	Technical topic	Is this regulation applicable to the facility?	Was the regulation addressed?	Is the applicant's plan technically adequate?	Comments
Subpart L - Waste Piles					
265.252	Waste Analysis	No	-	-	
Subpart M - Land Treatment					
265.273	Waste Analysis	No	-	-	
Subpart O - Incinerators					
265.341	Waste Analysis	No	-	-	
Subpart P - Thermal Treatment					
265.375	Waste Analysis	No	-	-	
Subpart Q - Chemical, Physical, and Biological Treatment					
265.402	Waste Analysis and Trial Tests	Yes	Yes	Yes	

N/D = Not Determined
N/A = Not Applicable

- The plan does not cite specific analytical methods for the specific parameters that are used to characterize a sample of the hazardous waste as required under 265.13(b)(2).

- The plan does not include specific sampling methods for a representative sample as required under 265.13(b)(3).

SITE DESCRIPTION

The Pier 91 facility was formerly a U.S. Naval facility and is located on Puget Sound's northern waterfront adjacent to Elliott Bay. Pier 91 has been developed into a prominent marine recycling terminal for large quantities of bilges and ballast waters, both industrial and hazard classes. The facility also serves as interim storage for reprocessed material that can be shipped via truck, rail, or barge. In addition, a portion of this 8,000,000 gallon complex is leased as a marine fuel depot by Pacific Northern Oil Company.

Pier 91's main function is waste oil reclamation. The maximum capacity of Chempro's operation at Pier 91 is 3.5 million gallons. Waste oil is recycled by tank treatments such as separation of impurities and breaking emulsions. All the processed oil is currently sold to Pacific Northern Oil Co. as cutting stock for marine oils. Pier 91 also treats liquid wastes contaminated with low level heavy metals and/or other low concentration hazardous wastes which can be treated to render the liquids nonhazardous.

The operation currently involves 6 to 10 employees operating through two shifts five days per week. This varies according to market conditions.

The waste oil is delivered to Pier 91 in tanker trucks and pumped into the tanks according to the site piping layout. This layout includes the loading area for transportation of materials offsite.

Storm or rain water suitable for discharge to the Metro sewer system is collected by drains connected to the catchment basin. Storm waters are processed through the oil/water separator and then discharged to Metro sewers. An oil/water photocell monitoring device sounds an alarm if permitted levels of oil are exceeded.

Industrial wastewater leaving the plant is collected and treated on a batch basis. The batch container is sampled after each treatment, and the samples are composited and analyzed for applicable pollutants. The Pier 91 facility only discharges water which is within the limits of the Metro discharge permit.

GENERAL DESCRIPTION OF PROPOSED WASTE ANALYSIS PLAN

The proposed waste analysis plan includes procedures for characterizing the waste for purposes of treatment and storage. The following steps were identified in the waste analysis plan.

Initially, the waste generator will complete a Chempro Waste Profile Sheet. The waste generator will also collect a representative sample of the waste to be treated. Chempro laboratory analysts will then analyze this sample, and recommend treatment based on the results.

Analysis of the waste will be repeated whenever the properties of the waste have changed or the containers appear to have been "misidentified". At a minimum, wastes will be reanalyzed annually.

Trial treatments will be conducted on all wastes proposed for treatment which are not currently being treated at Chempro. These trial treatments are intended to establish the effectiveness of treatment, to reveal potential hazards or difficulties with the use of the treatment method, and to determine compatability with existing Chempro treatment systems.

Records of all waste analyses and trial treatments will be maintained in the Chempro laboratory and in the appropriate treatment plant.

GCA COMMENTS ON THE COMPLETENESS AND TECHNICAL ADEQUACY OF THE WASTE ANALYSIS PLAN

The following narrative summarizes the requirements of 40 CFR Subparts B, J, and Q. It also identifies the deficiencies in the waste analysis plan relative to these requirements.

Subpart B (265.13) - General Waste Analysis

Waste Characterization (265.13(a)(1))--

As an offsite facility, Chempro Pier 91 is required to obtain a chemical and physical analysis of every shipment they receive prior to accepting it. This information may be supplied by the waste generator or generated by Chempro, but it must contain all the information needed to treat or dispose of the waste.

Chempro performs its own analyses on samples obtained from the waste generator. Additionally, a Chempro Waste Profile Sheet is completed by the waste generator. This sheet contains further information to characterize the hazardous waste. An evaluation of Chempro's waste characterization procedures is included in the more detailed subsections below.

Frequency of Analysis (265.13(a)(3))--

This regulation requires that the analysis of a hazardous waste must be repeated as necessary to ensure that it is accurate and up to date.

Chempro states that a retest of the waste will be done whenever the results of a routine inspection of each shipment suggests a misidentification of the waste. Chempro will also retest the wastes annually. The frequencies of analysis stated by Chempro are adequate to meet the requirements of this subpart.

Inspection of Shipments (265.13(a)(4))--

As an offsite facility, Chempro is responsible for inspecting and, if necessary, analyzing every waste shipment received in order to determine whether the waste matches that specified on the manifest or shipping paper.

Chempro states that they will inspect every shipment of waste and gives the guidelines which this inspection will follow. They do not, however, relate this to a comparison with the generator's original manifest, although this is implied in the retest section of the waste analysis plan. GCA recommends this comparison to be stated in the waste analysis plan as part of their inspection procedure to comply with 265.13(a)(4).

Written Waste Analysis Plan (265.13(b))--

This regulation stipulates that the owner or operator of a waste facility must develop and follow a written waste analysis plan which describes the procedures he will utilize to characterize a waste. This plan must be present at the facility. Though an onsite inspection was not performed, Chempro has developed a waste analysis plan and it is assumed that this plan is present at the facility. The specifics required under Section 265.13(b) are detailed below.

Parameters for Analysis and Rationale for Their Selection (265.13(b)(1))--

This regulation requires a waste facility to specify the parameters for which hazardous wastes will be analyzed and the rationale for their selection.

Chempro reportedly selects parameters for analysis with the intention of identifying and quantifying hazardous characteristics of the waste; determining compatability with existing Chempro treatment, storage, and disposal systems; and establishing the effectiveness of proposed treatment methods. This rationale appears to be technically adequate. However, specific parameters for this testing are not listed in their waste analysis plan. GCA recommends that the specific parameters for which each waste will be analyzed be listed in the waste analysis plan.

Test Methods for Analysis (265.13(b)(2)--

This regulation requires that the test methods which will be used to test for the parameters in the waste analysis plan be specified.

Chempro gives specific test methods for the physical examination of the wastes. All other test methods for any specific parameter are referenced to EPA and ASTM methodologies. GCA recommends that specific analytical methods be cited in the waste analysis plan (in conjunction with listing specific parameters for analysis).

Sampling Methods (265.13(b)(3))--

This regulation requires that the sampling method used for obtaining a representative sample of waste be supplied in the waste analysis plan.

Chempro describes their onsite sampling method for incoming shipments. However, they do not describe the generator's sampling method, even though they rely on the generator for a "representative sample." The method for obtaining this sample must be specified, as required by 265.13(b)(3).

Frequency of Analysis (265.13(b)(4))--

This regulation requires that the frequency with which the initial analysis of the waste will be reviewed or repeated be sufficient to ensure that analysis records are accurate and up to date. Chempro states that the waste will be retested at least annually. GCA feels that this schedule, coupled with the provisions to test more frequently if necessary, will ensure that the data are current and accurate.

Waste Analysis Data Supplied by Offsite generators (265.13(b)(5))--

This regulation requires offsite facilities to include in their plan the analyses that hazardous waste generators have agreed to supply. Chempro does not rely on information supplied by generators for their analyses, hence this requirement does not apply to this facility.

Procedure to Determine the Identity of Each Movement of Waste (265.13(c))--

This regulation requires that offsite facilities supply the procedures which will be used to identify each movement of waste managed at the facility. As explained in the discussion of 265.13(a)(4), Chempro has not fully complied with this requirement.

Subpart J - Tanks

Waste Analysis and Test Trials (265.193)--

The regulations in this subpart apply whenever hazardous waste, which is substantially different from previously treated waste, is to be treated at the facility and/or whenever a substantially different process is to be employed at the facility. Facilities for which this subpart is applicable are required to perform waste analyses and trial treatment tests (e.g., bench-scale or pilot scale tests) for the new type of waste and/or treatment process. Alternatively, written and documented information on similar treatment of similar waste may be obtained to satisfy this requirement.

The Chempro waste plan includes the use of trial treatment tests and waste analyses for new wastes and/or treatment processes, and therefore complies with this requirement.

Subpart Q - Chemical, Physical, and Biological Treatment

Waste Analysis and Trial Tests (265.402)--

The regulations in this subpart apply whenever hazardous waste which is substantially different from previously treated waste is to be treated at the facility, and/or whenever a substantially different treatment process is to be employed at the facility. Facilities for which this subpart is applicable are required to perform waste analyses and trial treatment tests (e.g., bench-scale or pilot scale tests) for the new type of waste and/or treatment process. Alternatively, written and documented information on similar treatment of similar waste may be obtained to satisfy this requirement.

The Chempro waste plan includes the use of trial treatment tests and waste analyses for new wastes and/or treatment processes, and therefore satisfies this requirement.